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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/082,237	02/26/2002	James Lu	SUND 275	3516

7590 12/22/2004  
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EXAMINER

PERUNGAVOOR, SATHYANARAYA V

ART UNIT PAPER NUMBER

2625

DATE MAILED: 12/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/082,237		LU, JAMES	
	<b>Examiner</b>		<b>Art Unit</b>	
	Sath Perungavoor		2625	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 02/26/2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 February 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## DETAILED ACTION

### *Priority*

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 90118246, filed on 7/25/2001.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-18 rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Regarding claim 1, "call-back function unit" and image effect module should be discussed in further detail. Detailed description merely states the functionality, but does not describe in sufficient detail the actual implementation. Details on the encapsulation implementation should be disclosed explicitly. Also, disclosed must be any objects or pointers exchanged between modules, that enables the encapsulation implementation.

Similarly, claims 2-6 are being rejected as being dependent on claim 1.

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Regarding claim 7, "call-back function unit" and image effect module should be discussed in further detail. Detailed description merely states the functionality, but does not describe in sufficient detail the actual implementation. Details on the encapsulation implementation should be disclosed explicitly. Also, disclosed must be any objects or pointers exchanged between modules, that enables the encapsulation implementation.

Similarly, claims 7-12 are being rejected as being dependent on claim 7.

Regarding claim 13, "call-back function unit" and image effect module should be discussed in further detail. Detailed description merely states the functionality, but does not describe in sufficient detail the actual implementation. Details on the encapsulation implementation should be disclosed explicitly. Also, disclosed must be any objects or pointers exchanged between modules, that enables the encapsulation implementation.

Similarly, claims 13-18 are being rejected as being dependent on claim 13.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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3. Claims 1-18 rejected under 35 U.S.C. 102(b) as being anticipated by Java 2D Graphics (NPL document, see PTO-892) here after known as Java 2D.

Regarding claim 1, Java 2D discloses a method for producing an image effect, applied to an image residing in an image buffer, wherein the image comprises a source image and a destination image, the method comprising the steps of (Fig. 10.1):

(a) obtaining the source image through an access call-back function unit (9.2.1.2; Event driven programming languages like Java and C++ use call back functions to trigger action only when needed. This concept is well known and used in many established systems.);

(b) transferring the source image and the access call-back function unit to an image effect module (10.1; Image effect module BufferedImageOp receives the source image and the pointer to the java.awt.image class, which functions as the call-back function.);

(c) performing the image effect processing and the image accessing through the access call-back function unit by the image effect module (10.1; BufferedImageOp instances a image processing object "op.filter" and performs processing on accessed source image.);

(d) returning the destination image by the image effect module (Fig. 10.1); and

(e) receiving a plurality of pixel values of the destination image through the access call-back unit function (10.1; Return function "return op.filter(source, null)"

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provides for the destination image receiving capabilities for the call-back function or other image effect functions.).

Regarding claim 2, Java 2D discloses the method according to claim 1, wherein said step of performing the image accessing through the access call-back function unit further comprises:

- (c1) creating the destination image (Fig. 10.1);
- (c2) getting a plurality of pixel values of the source image after the image effect processing (Fig. 10.1); and
- (c3) setting the pixel values of the source image to pixel values of the destination image (Fig. 10.1).

Regarding claim 3, Java 2D discloses the method according to claim 2, wherein the image accessing is stopped by the image effect module after said step (c1), the method further comprises a step of deleting the destination image by the access call-back function unit (9.2.1.2; Constructors can be used to delete images, by setting the created objects to NULL.).

Regarding claim 4, Java 2D discloses the method according to claim 2, wherein after said step of (c2); the image effect module performs a calculation to produce image effect (Fig. 10.1).

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Regarding claim 5, Java 2D discloses the method according to claim 1, wherein in said step of (b), the source image and the access call-back function unit are transferred to the image effect module by way of parameters (10.1; Image effect module BufferedImageOp receives the source image and the pointer to the java.awt.image class, which functions as the call-back function. These are passed as parameters.).

Regarding claim 6, Java 2D discloses the method according to claim 5, wherein an access interface to access the pixel values of the source image and the destination image residing in an image buffer is determined by a buffer manager (11.1; BufferedImage acts as the buffer manager.).

Regarding claim 7, Java 2D discloses a device for producing an image effect, applied to an image residing in an image buffer, wherein the image has a plurality of image pixel values, the device, comprising (2.1; 10.1; 11.1.2; BufferedImage object and the image effect module BufferedImageOp work on the pixel values of the image stored in memory.).

an access call-back function unit, for accessing the image pixel values (9.2.1.2; The accessed image is the pixel values of the image. Event driven programming languages like Java and C++ use call back functions to trigger action only when needed. This concept is well known and used in many established systems.);

a buffer manager, coupled to the access call-back function unit, for determining the access interface of the image pixel values (11.1; 9.2.1.2; java.awt.image provides the call-back functions and BufferedImage class provides the buffer manager.);

an image effect module, receiving the image and the access call-back function unit to perform the image accessing and the calculation on the image pixel values during the image effect processing (10.1; Image effect module BufferedImageOp receives the source image and the pointer to the java.awt.image class, which functions as the call-back function.).

Regarding claim 8, Java 2D discloses the device according to claim 7, wherein the image further includes a source image and a destination image (Fig. 10.1).

Regarding claim 9, Java 2D discloses the device according to claim 8, wherein the image pixel values further include a plurality of pixel values of the source image and a plurality of the pixel values of the destination image (10.1; BufferedImage filter uses source and destination image pixels. Since, the function operates on images with plurality of pixels.)

Regarding claim 10, Java 2D discloses the device according to claim 7, wherein the image effect module further includes a plurality of image effect functions (1.2; 10.1; Cited reference discloses that any number of image effect implementations are possible.)



Regarding claim 11, Java 2D discloses the device according to claim 7, wherein the source image and the access call-back function unit are both offered to the image effect module by way of parameters (10.1; Image effect module BufferedImageOp receives the source image and the pointer to the java.awt.image class, which functions as the call-back function. These are passed as parameters.).

Regarding claim 12, Java 2D discloses the device according to claim 7, wherein when the image effect module stops the image accessing, the access call-back function unit deletes the destination image (9.2.1.2; Constructors can be used to delete images, by setting the created objects to NULL.).

Regarding claim 13, Java 2D discloses a computer readable medium (2.1; Rendering engines are usually computers with a readable medium.).

All other remaining limitations set forth are rejected as per the discussion in claim 1.

Regarding claim 14, all limitations set forth are rejected as per the discussion in claims 12 and 2.

Regarding claim 15, all limitations set forth are rejected as per the discussion in claims 12 and 3.

Regarding claim 16, all limitations set forth are rejected as per the discussion in claims 12 and 4.

Regarding claim 17, all limitations set forth are rejected as per the discussion in claims 12 and 5.

Regarding claim 18, all limitations set forth are rejected as per the discussion in claims 12 and 6.

***Other Prior Art Cited***

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Blixt (US 5, 815, 165) discloses a graphics processor.

Butterfield et al. (US 5,509,115) discloses an image buffer management system.

Shaw et al. (US 5,604,843) discloses a graphics driver with buffers.

Kukol (US 5,628,016) discloses call-back functions.

Microsoft DirectX (<http://msdn.microsoft.com/>) discloses a graphics API.

OpenGL (<http://www.opengl.org/>) discloses a graphics API.

These are only a few of the commonly used graphics API and have the functionalities of the claimed invention.


**Contact Information**

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sath Perungavoor whose telephone number is (703) 306-4116. The examiner can normally be reached on Monday to Friday from 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta whose telephone number is (703) 308-5246, can be reached on Monday to Friday from 9:00am to 5:00pm. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sath Perungavoor  
Art Unit 2625  
December 16, 2004

  
KANUBHAI PATEL  
PRIMARY EXAMINER